From: Ed Nam

To: Antonio Fernandez; Brian Nelson
Cc: Tad Wysor; Roberts French

Subject: Re: EPA - Honda Follow-up to 7/14 Meeting - AC Credits Discussion

Date: 07/20/2009 02:17 PM

Brian, Tony,

There are some good questions in here. Please think about some of these issues. Rob there are some in here that we might need to address together.

thanks

-Ed

▼ Robert_Bienenfeld---07/20/2009 01:32:54 PM---Ed: Thank you very much for taking the time to meet with us last week. We hope

From: Robert_Bienenfeld@ahm.honda.com

To: Ed Nam/AA/USEPA/US@EPA

Cc: Brian Nelson/AA/USEPA/US@EPA, Antonio Fernandez/AA/USEPA/US@EPA

Date: 07/20/2009 01:32 PM

Subject: EPA - Honda Follow-up to 7/14 Meeting - AC Credits Discussion

Ed:

Thank you very much for taking the time to meet with us last week. We hope

you found the exchange as valuable as we did. As we reviewed our discussion, and Honda's next steps, we realized we have a few more

questions that we want to get your feedback on first. As you requested, we

are now studying both the ANPRM Appendix, and the Idle Test. In preparation to study the Idle Test, we have the following questions:

 $\hat{\mbox{1.}}$ The test says to set the AC Temp @ 9°F below the test cell temperature.

What is the flexibility of the test cell temperature? Is this an opportunity for gaming?

2. How does the EPA-Proposed Idle Test consider Idle-Stop concepts like

hybrids and ISG systems?

3. What about eco-modes? Eco-modes, in the Insight, for example, reduce

AC load to improve FE. Currently, NHTSA allows FE testing with eco-modes

averaged into the test results.

4. Your test states that manual ACs should set their systems to $\mbox{\rm Max}$ AC,

"with no recirculation." Most "Max AC" modes do not allow their systems to

remain on Max while manually defeating the recirculation requirement.

5. Are there other ways that EPA has been updating its thinking about the

idle test that might be informative and helpful?

6. EPA requests that the data be reported in CO2 grams/min/cubic foot.

How does EPA plan to use the cubic foot data?

7. Does EPA have an image of how the Idle Test could lead to an

Indirect AC Credit calculation?

You might be interested in some of the issues we plan to explore in our

Idle Test study/research. If you have some opinion/thought about these

research issues, we would very much like to hear from you before we commit

resources towards their study :
a) Does the EPA-Proposed Idle Test unfairly penalize an OEM who has worked

hard to minimize friction at idle? The theory being tested here is that

while the absolute AC load may be the same for two given OEMs, the AC load $\,$

as a percent of the non-AC idling work might be much higher among one OEM

compared to another.

b) Does the EPA-Proposed Idle Test unfairly penalize scroll-type compressors vs piston-type compressors? The working theory here is that

piston-type compressors have their optimal efficiency at idle, and higher

RPMs are relatively less efficient, while scroll-type compressors have

their optimal efficiency at higher rpms.

Your prompt thoughts and response on these issues will greatly aid in our analysis and consideration of the EPA-Proposed Idle Test.

Robert

From: Robin Moran

To: <u>Brian Nelson; Antonio Fernandez; Roberts French; Christopher Lieske</u>

Cc: <u>William Charmley</u>; <u>Ed Nam</u>; <u>Linc Wehrly</u>

Subject: Honda issues **Date:** 11/11/2009 09:29 PM

Honda is coming in Friday to discuss several issues, but there's a few they asked for answers on in the meantime:

Brian/Tony -- can you respond to Honda's A/C issues #3(a) and (d)? Rob -- can you look at (b) and (c), and let me know what you think. He also mentions the footprint calculation inconsistency issue (k) -- do you know what that is?

Thanks, Robin

---- Forwarded by Robin Moran/AA/USEPA/US on 11/11/2009 09:24 PM -----

From: Robert_Bienenfeld@ahm.honda.com

To: William Charmley/AA/USEPA/US@EPA, Robin Moran/AA/USEPA/US@EPA, Ed Nam/AA/USEPA/US@EPA,

steve.wood@dot.gov, rebecca.yoon@dot.gov

Cc: masaki_yamaguchi@ahm.honda.com, Ichiro_Sakai@ahm.honda.com,

Tetsuro_Sekikawa%HRDJP@ahm.honda.com

Date: 11/10/2009 09:06 PM

Subject: Draft Memo

Bill, Robin, Ed, Stephen, Rebecca:

Thanks, again for planning to meet with us on Friday, November 13th, from 10am EST in Ann Arbor.

- #1. Request: We would like to see if we can extend the meeting from 10am 11:30am to 10am 12pm. We think this will enable us to get through our issues.
- $\mbox{\#2.}$ FYI: We are planning to meet with Lucie Audette to discuss label issues from 9am 10am
- #3. We have several, minor issues that we would like to ask in advance of our meeting, that we do not plan to discuss, unless time permits:
 - a) A/C Idle Test: There is no description of fan speed for manual AC systems in the idle test description. Honda assumes the condition of the fan speed should be set to "Max." Is this correct? Will you clarify in the regulation?
 - b) VMT application to LDT1: For early credits (MY09-MY11), VMT for PC is applied to PC and LDT1, and for the regular credits (MY12+) VMT for PC is applied to PC only. Is this your intent?
 c) Duel Fuel Vehicles: Is EPA considering PHEVs as "dual fuel
 - c) Duel Fuel Vehicles: Is EPA considering PHEVs as "dual fuel vehicles." Dual fuel vehicles have a phased-out credit (by 2020). If PHEVs are not considered "Dual Fuel" vehicles, then how do you plan to treat them?

 - In 40CFR1866-12(c)(1): A/C credits are conditioned on an improvement of 10% "when compared to previous design"
 - of 10% "when compared to previous design"
 In 40CFR1866-12(c)(6): A/C credits are conditioned on 10% improvement "when compared to a system using standard, or prior model

year" designs

Which is correct? Honda thinks it should be based on "previous or standard design" not "prior model year" design.

- e) PHEV EAER: ARB uses Rcda during FTP. EPA does not have a specific description of EAER. Honda proposes that EPA use ARB's definition.
- #4. During our visit, Honda proposes the following agenda items:
 a) Zero grams/mile for EV, PHEV and FCEV. Honda would like to review EPA's thinking

b) Super Credits: Honda will propose a formula

- c) FFV Credits: Honda will request that one vehicle can earn FFV credits for the entire fleet, not just car FFV credits or truck FFV credits.
- d) Downsizing Issue: Honda will propose a value for Truck cap that is
- different from the 41 square foot car cap.
 e) N20 & CH4 Issue: Honda will propose change the "cap" to a "default" and use the CO2e approach
- f) In Use Standard: Honda will discuss the challenges and make a proposal
- g) A/C Credit Issues: Honda will propose modifying the 14.9 grams/minute qualifying requirement, and propose an alternative COP improvement pathway.
- h) Truck Strake: This is an enforcement/interpretation issue. Strakes improve F/E, but can disqualify the vehicle from the Truck category. i) Off-Cycle Credits: Honda will propose some qualification and testing changes.
- j) PHÉV 75% Useful Life Indicator: This is "on the books" at EPA since 2001, however the Preamble indicates no intention to have GHG OBD at this time.
- k) Footprint Calculation differences between EPA and NHTSA: we will explain this problem and propose to use EPA's calculation.

From: William Charmley
To: Robin Moran

Cc: Antonio Fernandez; Brian Nelson; Christopher Lieske; Ed Nam; Linc Wehrly; Roberts French

Subject: Re: Honda issues **Date:** 11/12/2009 10:26 AM

Attachments: Internal EPA Document - Honda Questions from Nov 10, 2009.doc

Dear all - if it's possible to draft responses in the attached for the "minor" Honda issues and email it around that would be helpful.

Also - what is a "truck strake" referenced under item 4.H.?

thanks Bill



Internal EPA Document - Honda Questions from Nov 10, 2009.doc

▼ Robin Moran---11/11/2009 09:29:34 PM---Honda is coming in Friday to discuss several issues, but there's a few they asked for answers on in

From: Robin Moran/AA/USEPA/US

To: Brian Nelson/AA/USEPA/US@EPA, Antonio Fernandez/AA/USEPA/US@EPA, Roberts

French/AA/USEPA/US@EPA, Christopher Lieske/AA/USEPA/US@EPA

Cc: William Charmley/AA/USEPA/US@EPA, Ed Nam/AA/USEPA/US@EPA, Linc Wehrly/AA/USEPA/US@EPA

Date: 11/11/2009 09:29 PM

Subject: Honda issues

Honda is coming in Friday to discuss several issues, but there's a few they asked for answers on in the meantime:

Brian/Tony -- can you respond to Honda's A/C issues #3(a) and (d)? Rob -- can you look at (b) and (c), and let me know what you think. He also mentions the footprint calculation inconsistency issue (k) -- do you know what that is?

Thanks, Robin

---- Forwarded by Robin Moran/AA/USEPA/US on 11/11/2009 09:24 PM -----

From: Robert_Bienenfeld@ahm.honda.com

To: William Charmley/AA/USEPA/US@EPA, Robin Moran/AA/USEPA/US@EPA, Ed Nam/AA/USEPA/US@EPA,

steve.wood@dot.gov, rebecca.yoon@dot.gov

Cc: masaki_yamaguchi@ahm.honda.com, Ichiro_Sakai@ahm.honda.com,

Tetsuro Sekikawa%HRDJP@ahm.honda.com

Date: 11/10/2009 09:06 PM

Subject: Draft Memo

Bill, Robin, Ed, Stephen, Rebecca: Thanks, again for planning to meet with us on Friday, November 13th, from 10am EST in Ann Arbor. #1. Request: We would like to see if we can extend the meeting from 10am - 11:30am to 10am - 12pm. We think this will enable us to get through our issues. #2. FYI: We are planning to meet with Lucie Audette to discuss label issues from 9am - 10am #3. We have several, minor issues that we would like to ask in advance of a) A/C Idle Test: There is no description of fan speed for manual AC our meeting, that we do not plan to discuss, unless time permits: systems in the idle test description. Honda assumes the condition of the fan speed should be set to "Max." Is this correct? Will you clarify in the regulation? b) VMT application to LDT1: For early credits (MY09-MY11), VMT for PC is applied to PC and LDT1, and for the regular credits (MY12+) VMT for PC is applied to PC only. Is this your intent?
c) Duel Fuel Vehicles: Is EPA considering PHEVs as "dual vehicles." Dual fuel vehicles have a phased-out credit (by 2020). If PHEVs are not considered "Dual Fuel" vehicles, then how do you plan to treat them? d) A/C Credits: There seems to be an inconsistency between two references: In 40CFR1866-12(c)(1): A/C credits are conditioned on an improvement of 10% "when compared to previous design"
In 40CFR1866-12(c)(6): A/C credits are conditioned on 10% improvement "when compared to a system using standard, or prior model year" designs Which is correct? Honda thinks it should be based on "previous or standard design" not "prior model year" design.
e) PHEV EAER: ARB uses Rcda during FTP. EPA does not have a specific description of EAER. Honda proposes that EPA use ARB's definition. #4. During our visit, Honda proposes the following agenda items: a) Zero grams/mile for EV, PHEV and FCEV. Honda would like to review EPA's thinking b) Super Credits: Honda will propose a formula c) FFV Credits: Honda will request that one vehicle can earn

credits for the entire fleet, not just car FFV credits or

truck FFV

credits.

d) Downsizing Issue: Honda will propose a value for Truck cap that is

different from the 41 square foot car cap.

e) N2O & CH4 Issue: Honda will propose change the "cap" to a "default"

and use the CO2e approach

f) In Use Standard: Honda will discuss the challenges and make a

proposal

g) A/C Credit Issues: Honda will propose modifying the 14.9 grams/minute qualifying requirement, and propose an alternative COP

improvement pathway.

h) Truck Strake: This is an enforcement/interpretation issue. Strakes

improve F/E, but can disqualify the vehicle from the Truck category.

- i) Off-Cycle Credits: Honda will propose some qualification and
- testing changes.
 j) PHEV 75% Useful Life Indicator: This is "on the books" at EPA since
- 2001, however the Preamble indicates no intention to have GHG OBD at $\,$

this time.

- k) Footprint Calculation differences between $\ensuremath{\mathtt{EPA}}$ and $\ensuremath{\mathtt{NHTSA}}\xspace$ we will
 - explain this problem and propose to use EPA's calculation.

From: Roberts French
To: Robin Moran

Cc: Antonio Fernandez; Brian Nelson; Christopher Lieske; Ed Nam; Linc Wehrly; William Charmley

Subject: Re: Honda issues **Date:** 11/12/2009 12:33 PM

#3

b) VMT application to LDT1: For early credits (MY09-MY11), VMT for PC is applied to PC and LDT1, and for the regular credits (MY12+) VMT for PC is applied to PC only. Is this your intent?

Yes. For early CA-based credit options we are using the CA fleet definitions, but chose to not tinker with the VMT figures. There are so few LDT1s that we reasoned that it really wasn't going to make a huge difference, and the program is far less complex by taking this approach.

c) Duel Fuel Vehicles: Is EPA considering PHEVs as "dual fuel vehicles." Dual fuel vehicles have a phased-out credit (by 2020). If PHEVs are not considered "Dual Fuel" vehicles, then how do you plan to treat them?

Yes, we are treating them as dual-fuel vehicles, at least with respect to cert and labeling. However, under EPCA CAFE requirements, a dual fuel vehicle where electricity is the alternative fuel has to be able to drive the city cycle and the highway cycle on electricity if it is to be considered a dual fuel vehicle. I'm not 100% sure of how NHTSA will calculate MPG for these, but I know the two options. Our regs do not address dual fuel vehicles except for alcohol and gaseous alternative fuels, and extension of our approach regarding FFVs to PHEVs needs to be discussed. Our regs do not include a credit for all dual fuel vehicles, although the statute does, so we will need to interpret how to calculate such a credit.

#4(k)

Not sure what the footprint calculation inconsistency is, without more explanation. When people speak of "footprint calculation" they are often speaking about one of two things: either the calculation of the actual footprint in square feet of a given vehicle, or the calculation of the footprint-based standard. Without more detail I don't know which, although I don't think there should be an inconsistency in the former, and we tried to be consistent but more detailed/thorough in the latter. I'll be interested in hearing what they have to say.

Roberts W. French, Jr. U.S. EPA Office of Transportation and Air Quality Compliance and Innovative Strategies Division 2000 Traverwood Drive Ann Arbor, MI 48105

Phone: 734.214.4380 Fax: 734.214.4869 Email: french.roberts@epa.gov

[▼] Robin Moran---11/11/2009 09:29:34 PM---Honda is coming in Friday to discuss several issues, but there's a few they asked for answers on in

From: Robin Moran/AA/USEPA/US

To: Brian Nelson/AA/USEPA/US@EPA, Antonio Fernandez/AA/USEPA/US@EPA, Roberts

French/AA/USEPA/US@EPA, Christopher Lieske/AA/USEPA/US@EPA

Cc: William Charmley/AA/USEPA/US@EPA, Ed Nam/AA/USEPA/US@EPA, Linc Wehrly/AA/USEPA/US@EPA

Date: 11/11/2009 09:29 PM

Subject: Honda issues

Honda is coming in Friday to discuss several issues, but there's a few they asked for answers on in the meantime:

Brian/Tony -- can you respond to Honda's A/C issues #3(a) and (d)? Rob -- can you look at (b) and (c), and let me know what you think. He also mentions the footprint calculation inconsistency issue (k) -- do you know what that is?

Thanks, Robin

---- Forwarded by Robin Moran/AA/USEPA/US on 11/11/2009 09:24 PM -----

From: Robert_Bienenfeld@ahm.honda.com

To: William Charmley/AA/USEPA/US@EPA, Robin Moran/AA/USEPA/US@EPA, Ed Nam/AA/USEPA/US@EPA,

steve.wood@dot.gov, rebecca.yoon@dot.gov

Cc: masaki_yamaguchi@ahm.honda.com, Ichiro_Sakai@ahm.honda.com,

Tetsuro Sekikawa%HRDJP@ahm.honda.com

Date: 11/10/2009 09:06 PM

Subject: Draft Memo

treat them?

Bill, Robin, Ed, Stephen, Rebecca:

Thanks, again for planning to meet with us on Friday, November 13th, from 10am EST in Ann Arbor.

- #1. Request: We would like to see if we can extend the meeting from 10am 11:30am to 10am 12pm. We think this will enable us to get through our issues.
- #2. FYI: We are planning to meet with Lucie Audette to discuss label issues from 9am 10am
- #3. We have several, minor issues that we would like to ask in advance of our meeting, that we do not plan to discuss, unless time permits:
 - a) A/C Idle Test: There is no description of fan speed for manual AC systems in the idle test description. Honda assumes the condition of the fan speed should be set to "Max." Is this correct? Will you clarify in the regulation?
 - clarify in the regulation?
 b) VMT application to LDT1: For early credits (MY09-MY11), VMT for PC is applied to PC and LDT1, and for the regular credits (MY12+) VMT for PC is applied to PC only. Is this your intent?
 - PC is applied to PC only. Is this your intent?
 c) Duel Fuel Vehicles: Is EPA considering PHEVs as "dual fuel vehicles." Dual fuel vehicles have a phased-out credit (by 2020). If PHEVs are not considered "Dual Fuel" vehicles, then how do you plan to
 - d) A/C Credits: There seems to be an inconsistency between two

references:

In 40CFR1866-12(c)(1): A/C credits are conditioned on an improvement of 10% "when compared to previous design"

In 40CFR1866-12(c)(6): A/C credits are conditioned on 10% improvement "when compared to a system using standard, or prior model year" designs

Which is correct? Honda thinks it should be based on "previous or standard design" not "prior model year" design.

- e) PHEV EAER: ARB uses Rcda during FTP. EPA does not have a specific description of EAER. Honda proposes that EPA use ARB's definition.
- #4. During our visit, Honda proposes the following agenda items:
 a) Zero grams/mile for EV, PHEV and FCEV. Honda would like to review EPA's thinking

b) Super Credits: Honda will propose a formula

- c) FFV Credits: Honda will request that one vehicle can earn FFV credits for the entire fleet, not just car FFV credits or truck FFV credits.
- d) Downsizing Issue: Honda will propose a value for Truck cap that is different from the 41 square foot car cap.
- e) N2O & CH4 Issue: Honda will propose change the "cap" to a "default" and use the CO2e approach
- f) In Use Standard: Honda will discuss the challenges and make a proposal
- g) A/C Credit Issues: Honda will propose modifying the 14.9 grams/minute qualifying requirement, and propose an alternative COP improvement pathway.
- h) Truck Strake: This is an enforcement/interpretation issue. Strakes improve F/E, but can disqualify the vehicle from the Truck category.
 i) Off-Cycle Credits: Honda will propose some qualification and testing changes.
- j) PHEV 75% Useful Life Indicator: This is "on the books" at EPA since 2001, however the Preamble indicates no intention to have GHG OBD at this time.
- k) Footprint Calculation differences between EPA and NHTSA: we will explain this problem and propose to use EPA's calculation.

From: William Charmley

To: <u>William Charmley</u>; <u>Robin Moran</u>

Cc: Antonio Fernandez; Brian Nelson; Christopher Lieske; Ed Nam; Linc Wehrly; Roberts French

Subject: Re: Honda issues **Date:** 11/13/2009 09:02 AM

Robin

Will we have any of our AC experts at the Honda meeting?

▼ William Charmley

---- Original Message ----From: William Charmley

Sent: 11/12/2009 10:26 AM EST

To: Robin Moran

Cc: Antonio Fernandez; Brian Nelson; Christopher Lieske; Ed Nam; Linc

Wehrly; Roberts French

Subject: Re: Honda issues

Dear all - if it's possible to draft responses in the attached for the "minor" Honda issues and email it around that would be helpful.

Also - what is a "truck strake" referenced under item 4.H.?

thanks Bill

[attachment "Internal EPA Document - Honda Questions from Nov 10, 2009.doc" deleted by William Charmley/AA/USEPA/US]

Robin Moran---11/11/2009 09:29:34 PM---Honda is coming in Friday to discuss several issues, but there's a few they asked for answers on in

From: Robin Moran/AA/USEPA/US

To: Brian Nelson/AA/USEPA/US@EPA, Antonio Fernandez/AA/USEPA/US@EPA, Roberts

French/AA/USEPA/US@EPA, Christopher Lieske/AA/USEPA/US@EPA

Cc: William Charmley/AA/USEPA/US@EPA, Ed Nam/AA/USEPA/US@EPA, Linc Wehrly/AA/USEPA/US@EPA

Date: 11/11/2009 09:29 PM

Subject: Honda issues

Honda is coming in Friday to discuss several issues, but there's a few they asked for answers on in the meantime:

Brian/Tony -- can you respond to Honda's A/C issues #3(a) and (d)? Rob -- can you look at (b) and (c), and let me know what you think. He also mentions the footprint calculation inconsistency issue (k) -- do you know what that is?

Thanks, Robin

---- Forwarded by Robin Moran/AA/USEPA/US on 11/11/2009 09:24 PM -----

From: Robert_Bienenfeld@ahm.honda.com

"previous or

To: William Charmley/AA/USEPA/US@EPA, Robin Moran/AA/USEPA/US@EPA, Ed Nam/AA/USEPA/US@EPA,

steve.wood@dot.gov, rebecca.yoon@dot.gov

Cc: masaki_yamaguchi@ahm.honda.com, Ichiro_Sakai@ahm.honda.com,

Tetsuro_Sekikawa%HRDJP@ahm.honda.com

Date: 11/10/2009 09:06 PM

Subject: Draft Memo

```
Bill, Robin, Ed, Stephen, Rebecca:
Thanks, again for planning to meet with us on Friday, November
13th, from
10am EST in Ann Arbor.
#1. Request: We would like to see if we can extend the meeting
from 10am
- 11:30am to 10am - 12pm. We think this will enable us to get
through our
issues.
#2. FYI: We are planning to meet with Lucie Audette to discuss
label
issues from 9am - 10am
#3. We have several, minor issues that we would like to ask in
advance of
our meeting, that we do not plan to discuss, unless time permits:
a) A/C Idle Test: There is no description of fan speed for manual AC
   systems in the idle test description. Honda assumes the
condition of
   the fan speed should be set to "Max." Is this correct? Will
   clarify in the regulation? b) VMT application to LDT1: For early credits (MY09-MY11),
VMT for PC
   is applied to PC and LDT1, and for the regular credits (MY12+)
VMT for
   PC is applied to PC only. Is this your intent?
c) Duel Fuel Vehicles: Is EPA considering PHEVs as "dual
fuel
   vehicles." Dual fuel vehicles have a phased-out credit (by
2020). If
   PHEVs are not considered "Dual Fuel" vehicles, then how do you
plan to
   treat them?
      A/C Credits: There seems to be an inconsistency between
two
   references:
      In 40CFR1866-12(c)(1): A/C credits are conditioned on an
improvement
   of 10% "when compared to previous design"
      In 40\text{CFR}1866-12(c)(6): A/C credits are conditioned on 10\%
   improvement "when compared to a system using standard, or
prior model
   year" designs
      Which is correct? Honda thinks it should be based on
```

standard design" not "prior model year" design.

e) PHEV EAER: ARB uses Rcda during FTP. EPA does not have a specific

description of EAER. Honda proposes that EPA use ARB's definition.

#4. During our visit, Honda proposes the following agenda items:
 a) Zero grams/mile for EV, PHEV and FCEV. Honda would like to
review

EPA's thinking

- b) Super Credits: Honda will propose a formula
- c) FFV Credits: Honda will request that one vehicle can earn

credits for the entire fleet, not just car FFV credits or truck $\ensuremath{\text{FFV}}$

credits.

d) Downsizing Issue: Honda will propose a value for Truck cap that is

different from the 41 square foot car cap.

e) N2O & CH4 Issue: Honda will propose change the "cap" to a "default"

and use the CO2e approach

f) In Use Standard: Honda will discuss the challenges and make a $% \left(1\right) =\left(1\right) +\left(1\right) +\left$

proposal

g) A/C Credit Issues: Honda will propose modifying the 14.9 grams/minute qualifying requirement, and propose an alternative COP

improvement pathway.

h) Truck Strake: This is an enforcement/interpretation issue. Strakes

improve F/E, but can disqualify the vehicle from the Truck category.

i) $\tilde{\text{O}}\text{ff-Cycle Credits:}$ Honda will propose some qualification and

testing changes.

- j) PHÉV 75% Useful Life Indicator: This is "on the books" at EPA since
- 2001, however the Preamble indicates no intention to have GHG $\ensuremath{\mathsf{OBD}}$ at

this time.

k) Footprint Calculation differences between $\ensuremath{\mathtt{EPA}}$ and $\ensuremath{\mathtt{NHTSA}}\xspace$ we will

explain this problem and propose to use EPA's calculation.

From: Robin Moran

To: <u>Linc Wehrly</u>; <u>Roberts French</u>; <u>Chris Nevers</u>

Subject: Honda question on PHEV EAER **Date:** 11/13/2009 09:49 AM

Honda asks this question on the GHG proposal -- do any of you have thoughts?

e) PHEV EAER: ARB uses Rcda during FTP. EPA does not have a specific description of EAER. Honda proposes that EPA use ARB's definition.

---- Forwarded by Robin Moran/AA/USEPA/US on 11/13/2009 09:48 AM -----

From: Robert_Bienenfeld@ahm.honda.com

To: William Charmley/AA/USEPA/US@EPA, Robin Moran/AA/USEPA/US@EPA, Ed Nam/AA/USEPA/US@EPA,

steve.wood@dot.gov, rebecca.yoon@dot.gov

Cc: masaki_yamaguchi@ahm.honda.com, Ichiro_Sakai@ahm.honda.com,

Tetsuro Sekikawa%HRDJP@ahm.honda.com

Date: 11/10/2009 09:06 PM

Subject: Draft Memo

Bill, Robin, Ed, Stephen, Rebecca:

Thanks, again for planning to meet with us on Friday, November 13th, from 10am EST in Ann Arbor.

- #1. Request: We would like to see if we can extend the meeting from 10am 11:30am to 10am 12pm. We think this will enable us to get through our issues.
- #2. FYI: We are planning to meet with Lucie Audette to discuss label issues from 9am-10am
- #3. We have several, minor issues that we would like to ask in advance of our meeting, that we do not plan to discuss, unless time permits:
 - a) A/C Idle Test: There is no description of fan speed for manual AC systems in the idle test description. Honda assumes the condition of the fan speed should be set to "Max." Is this correct? Will you clarify in the regulation?
 - clarify in the regulation?

 b) VMT application to LDT1: For early credits (MY09-MY11), VMT for PC is applied to PC and LDT1, and for the regular credits (MY12+) VMT for PC is applied to PC only. Is this your intent?
 - PC is applied to PC only. Is this your intent?
 c) Duel Fuel Vehicles: Is EPA considering PHEVs as "dual fuel vehicles." Dual fuel vehicles have a phased-out credit (by 2020). If PHEVs are not considered "Dual Fuel" vehicles, then how do you plan to treat them?
 - d) A/C Credits: There seems to be an inconsistency between two references:
 - In 40CFR1866-12(c)(1): A/C credits are conditioned on an improvement
 - of 10% "when compared to previous design"
 In 40CFR1866-12(c)(6): A/C credits are conditioned on 10% improvement "when compared to a system using standard, or prior model year" designs
 - Which is correct? Honda thinks it should be based on "previous or standard design" not "prior model year" design.
 - e) PHEV EAER: ARB uses Rcda during FTP. EPA does not have a specific description of EAER. Honda proposes that EPA use ARB's definition.
- #4. During our visit, Honda proposes the following agenda items:
 a) Zero grams/mile for EV, PHEV and FCEV. Honda would like to review EPA's thinking
 - b) Super Credits: Honda will propose a formula
 - c) FFV Credits: Honda will request that one vehicle can earn FFV credits for the entire fleet, not just car FFV credits or truck FFV

credits.

- d) Downsizing Issue: Honda will propose a value for Truck cap that is different from the 41 square foot car cap.
- e) N2O & CH4 Issue: Honda will propose change the "cap" to a "default" and use the CO2e approach
- f) In Use Standard: Honda will discuss the challenges and make a proposal
- g) A/C Credit Issues: Honda will propose modifying the 14.9 grams/minute qualifying requirement, and propose an alternative COP improvement pathway.
- h) Truck Strake: This is an enforcement/interpretation issue. Strakes improve F/E, but can disqualify the vehicle from the Truck category.

 i) Off-Cycle Credits: Honda will propose some qualification and testing changes.
- j) PHEV 75% Useful Life Indicator: This is "on the books" at EPA since 2001, however the Preamble indicates no intention to have GHG OBD at this time.
- k) Footprint Calculation differences between EPA and NHTSA: we will explain this problem and propose to use EPA's calculation.

From: <u>Chris Nevers</u>
To: <u>Robin Moran</u>

Cc: <u>Linc Wehrly; Roberts French</u>
Subject: Re: Honda question on PHEV EAER

Date: 11/13/2009 01:03 PM

Unless we incorporate some use of Equivalent All Electric Range in the label, we have no use for it. If we used an EAER, I would not want to be boxed in by ARB. Unlike ARB, we could be held to adjusting EAER via 5-cycle adjustment or some future adjustment.

Chris

▼ Robin Moran---11/13/2009 09:49:57 AM---Honda asks this question on the GHG proposal -- do any of you have thoughts? e) PHEV EAER: ARB us

From: Robin Moran/AA/USEPA/US

To: Linc Wehrly/AA/USEPA/US@EPA, Roberts French/AA/USEPA/US@EPA, Chris

Nevers/AA/USEPA/US@EPA

Date: 11/13/2009 09:49 AM

Subject: Honda question on PHEV EAER

Honda asks this question on the GHG proposal -- do any of you have thoughts?

e) PHEV EAER: ARB uses Rcda during FTP. EPA does not have a specific description of EAER. Honda proposes that EPA use ARB's definition.

---- Forwarded by Robin Moran/AA/USEPA/US on 11/13/2009 09:48 AM -----

From: Robert Bienenfeld@ahm.honda.com

To: William Charmley/AA/USEPA/US@EPA, Robin Moran/AA/USEPA/US@EPA, Ed Nam/AA/USEPA/US@EPA,

steve.wood@dot.gov, rebecca.yoon@dot.gov

Cc: masaki_yamaguchi@ahm.honda.com, Ichiro_Sakai@ahm.honda.com,

Tetsuro_Sekikawa%HRDJP@ahm.honda.com

Date: 11/10/2009 09:06 PM

Subject: Draft Memo

Bill, Robin, Ed, Stephen, Rebecca:

Thanks, again for planning to meet with us on Friday, November 13th, from 10am EST in Ann Arbor.

#1. Request: We would like to see if we can extend the meeting from 10am
- 11:30am to 10am - 12pm. We think this will enable us to get through our issues.
#2. FYI: We are planning to meet with Lucie Audette to discuss

lahel issues from 9am - 10am #3. We have several, minor issues that we would like to ask in advance of our meeting, that we do not plan to discuss, unless time permits: a) A/C Idle Test: There is no description of fan speed for manual AC systems in the idle test description. Honda assumes the condition of the fan speed should be set to "Max." Is this correct? Will you clarify in the regulation? b) VMT application to LDT1: For early credits (MY09-MY11), VMT for PC is applied to PC and LDT1, and for the regular credits (MY12+) VMT for PC is applied to PC only. Is this your intent?
c) Duel Fuel Vehicles: Is EPA considering PHEVs as "dual fuel vehicles." Dual fuel vehicles have a phased-out credit (by 2020). If PHEVs are not considered "Dual Fuel" vehicles, then how do you treat them? d) A/C Credits: There seems to be an inconsistency between two references: In 40CFR1866-12(c)(1): A/C credits are conditioned on an improvement of 10% "when compared to previous design" In 40CFR1866-12(c)(6): A/C credits are conditioned on 10% improvement "when compared to a system using standard, or prior model year" designs Which is correct? Honda thinks it should be based on "previous or standard design" not "prior model year" design. e) PHEV EAER: ARB uses Rcda during FTP. EPA does not have a specific description of EAER. Honda proposes that EPA use ARB's definition. #4. During our visit, Honda proposes the following agenda items: a) Zero grams/mile for EV, PHEV and FCEV. Honda would like to review EPA's thinking b) Super Credits: Honda will propose a formula c) FFV Credits: Honda will request that one vehicle can earn credits for the entire fleet, not just car FFV credits or truck FFV credits. d) Downsizing Issue: Honda will propose a value for Truck cap that is different from the 41 square foot car cap.
e) N2O & CH4 Issue: Honda will propose change the "cap" to a "default" and use the CO2e approach f) In Use Standard: Honda will discuss the challenges and make a proposal q) A/C Credit Issues: Honda will propose modifying the 14.9 grams/minute qualifying requirement, and propose an alternative COP improvement pathway. h) Truck Strake: This is an enforcement/interpretation issue. Strakes improve F/E, but can disqualify the vehicle from the Truck

i) Off-Cycle Credits: Honda will propose some qualification

j) PHEV 75% Useful Life Indicator: This is "on the books" at

category.

EPA since

testing changes.

and

2001, however the Preamble indicates no intention to have GHG OBD at $\,$

this time.

k) Footprint Calculation differences between $\ensuremath{\mathtt{EPA}}$ and $\ensuremath{\mathtt{NHTSA}}\xspace$ we will

explain this problem and propose to use EPA's calculation.

From: Robin Moran

Linc Wehrly; Janet Cohen; Roberts French To:

Subject: Honda presentation Date: 11/18/2009 03:27 PM

Attachments: EPA NHTSA Single National Standard Meeting Docs v4.pdf

Here's Honda's slides from last Friday. Linc, when you have some time to digest the in-use, other cert comments, let's discuss your thoughts.

Robin

---- Forwarded by Robin Moran/AA/USEPA/US on 11/18/2009 03:13 PM -----

Robert_Bienenfeld@ahm.honda.com From:

To: William Charmley/AA/USEPA/US@EPA, Robin Moran/AA/USEPA/US@EPA, "Stephen P. Wood"

<steve.wood@dot.gov>, "Rebecca S. Yoon" <rebecca.yoon@dot.gov>

Date: 11/13/2009 01:03 PM Subject: Today's presentation

Thanks, again for the meeting, today. Here is the document we shared with you - it is OK, no redactions necessary. Robert

Robert Bienenfeld Office: 310-783-3056 Mobile: 310-948-2569

> ---- Original Message ----From: Robert Bienenfeld Sent: 11/13/2009 07:17 AM PST To: phillip.gorney@dot.gov Cc: Tommy Chang

Subject: Draft Version

(See attached file: EPA NHTSA Single National Standard Meeting Docs v4.pdf)

Robert Bienenfeld Senior Manager, Environment and Energy Strategy Product Regulatory Office American Honda Motor Co., Inc.



310.783.3056 EPA NHTSA Single National Standard Meeting Docs v4.pdf

From: Peter Meier@ahm.honda.com

To: Roberts French/AA/USEPA/US@EPA; David Good/AA/USEPA/US@EPA

Cc: Joel Ball/AA/USEPA/US@EPA; Darin Johnson@ahm.honda.com; masaki yamaquchi@ahm.honda.com

Subject: Honda - Fw: GHG questions **Date:** 04/14/2011 03:01 PM

Attachments: Alliance GHG Implementation Questions for EPA Sep 23 2010 Work Shop.doc

```
Hello Rob and Dave.
I'm following up on an old document that the Alliance shared with AIAM (now Global Automakers). They had a list of 18 questions (below). We were wondering if EPA responded to any or all of these, and if so, could you share your responses? Of course if you can offer any other information that would be appreciated as well.
 Thank you,
 Pete Meier, American Honda Certification (310) 783-3424
  ---- Forwarded by Peter Meier/AHM/AM/HONDA on 04/14/2011 11:54 AM ----
                                           "Park, J. S. (Kia)" <jspark@kiausa.com>, "Alden, Jack (Honda)" <jack alden@ahm.honda.com>, "Alsip, Bob (Suzuki)" <bal>
"Park, J. S. (Kia)" <jspark@kiausa.com>, "Alden, Jack (Honda)" <jack alden@ahm.honda.com>, "Alsip, Bob (Suzuki)" <bal>
"Salamato, Ragiemra (Delphi)" <ragiemra.amato@delphi.com>, Annemarie Pender <a href="Pender <a h
 John Cabaniss <jcabaniss@aiam.org> on 12/11/2010 07:06:32 AM
 To:
```

<jie zeng@denso-diam.com>
Robert Maxwell <remaxwell@comcast.net>
:: FW: GHG questions Subject: AIAM Environment & Energy Subcommittee Certification - GHG - Alliance Questions Submitted to EPA Attached in the email below and in the attached Word document are follow up questions on GHG certification submitted by the Alliance to EPA after the EPA September workshop. EPA is preparing answers to these and other questions submitted by industry. Regards. John Cabaniss We have moved! As of December 13, my new contact information is: John M. Cabaniss, Jr. Director, Environment & Energy Association of International Automobile Manufacturers, Inc. 1050 K Street, NW Suite 650 Washington, DC 20001 202.650.5562 (direct) 202.650.5555 (main) Please note that AIAM will have limited phone/fax/email access from noon on Friday December 10 through Monday, December 13. This e-mail is intended for the sole and exclusive use of AIAM, its member companies and their employees. Distribution or forwarding of these materials to any other person or entity is strictly prohibited, absent prior consent of AIAM. From: Giedrius Ambrozaitis [mailto:gambrozaitis@autoalliance.org] Sent: Thursday, December 09, 2010 3:16 PM To: John Cabaniss Subject: RE: GHG questions We submitted the attached and then followed up with the following: Alliance of Automobile Manufacturers (248) 915-8836 From: Giedrius Ambrozaitis Sent: Monday, October 04, 2010 10:15 AM To: Wehrly.Linc@epamail.epa.gov Subject: RE: GHG Questions Thank you for holding the informative GHG Rule Implementation workshop on Sept 23 and for Dave Good's Sept 28 followup email pointing out sales tracking should follow NLEV (as per the GHG rule preamble). We had submitted some questions and several were answered, thankyou again, and several, we agree, are not yet ripe for asking (N2O and A/C Idle testing), but several were not answered or the answers given conflict with

To:

So, using our original questions doc (attached), here is a new list:
Alliance questions answered: 1, 2, 3, 4, 5 (we note on this question that
is very important for manufacturers to receive the list of changes to is very important for manufacturers to receive the list of changes to VERIFY data inputs as soon as possible to be able to efficiently implement the necessary IT changes), 6, 8, 15
Alliance questions we agree are too early to answer now: 10, 11, 16
Alliance questions that we would still like answered: 9, 12, 13, 14, 18
EPA answers that conflict: Alliance questions 7 and 17:
Question 7: EPA answered this on slide 68, bullet 3, subbullet 1-"Engineering evaluation required in Part I for CO2, CH4, N2O: Common calibration approaches are used at high altitudes." However, since EPA already requires compliance with emission standard at altitude there is no "Engineering evaluation required in Part I for CO2, CH4, N20: Common calibration approaches are used at high altitudes." However, since EPA already requires compliance with emission standard at altitude, there is no need for a further compliance statement that the calibration approaches are the same at high altitude as at low altitude. Indeed, the opposite may be true to ensure compliance with emission standard at high altitude. We recommend this subbullet be deleted.

Question 17: In order to align with CAFE, GHG compliance must be tracked via production data too, not via sales data. As Dave Good correctly points out in his Sep 28 email, the GHG rule preamble states that tracking is to be performed as it was in the NLEV rule, using "point of first sale", which is essentially the same as production data (with some slight inconsistencies for emergency vehicles and territories noted below). However, the actual GHG rule regulatory language and the slides from the Sep 23 workshop (slide 45 bullet 2) don't agree with that preamble language. 86.1867-12(a)(1)(iii)(A) states that "Total U.S. model year sales data will be used, instead of production data;" however, the introductory paragraph to 86.1867-12 states that "The terms 'sales' and 'sold' as used in this section shall mean vehicles produced and delivered for sale in the states and territories of the United States." Since EPA defined "sales" and "sold" in the introductory paragraph, the contradictory and confusing phrase "instead of production data" should be deleted from paragraph 86.1867-12(a)(1)(iii)(A).

Even though the use of NLEV sales tracking method is close to the same as using production paragraph is in snot exactly the same. This introduces 86.1867-12(a)(1)(iii)(A). Even though the use of NLEV sales tracking method is close to the same as using production numbers, it is not exactly the same. This introduces certain inconsistencies with CAFE's true production number tracking, for instance, with sales to territories that are in GHG but not CAFE, and with the tracking of emergency vehicle sales. Extra territories that are in GHG but not in CAFE, such as Guam, need to be excluded from the reporting but not in CAFE, such as Guam, need to be excluded from the reporting requirements, and the use of production data would accomplish this. For emergency vehicles, EPA stated on Sep 23 slide 14 that they're including emergency vehicles but then stated on Sep 23 slide 16 that the minimum testing requirements are the same as for CAFE so it "assures that the same data set will be used for both GHG & CAFE". Actually, it doesn't do that because police units will have tests for GHG that aren't used in CAFE. Although NLEV method is an acceptable method, we continue to recommend that GHG use exactly the same tracking as in CAFE. namely, production numbers. GHG use exactly the same tracking as in CAFE, namely, production numbers. EPA needs to be aware of the inconsistencies to make the VERIFY file formats compatible with this distinction, or preferably, allow manufacturers to report GHG for only the CAFE volumes plus emergency vehicles.
Totally new Alliance Question:
19. Regarding the 5cycle FE label rule's limitation of applicability of the 90 days rule (referring to the use of manufacturer tests for the litmus test instead of EPA confirmatory tests) only to MY2011. We have heard that in some special emergency cases, EPA would consider extending the rule also to past MY2011 vehicles. Can EPA clarify under what circumstance EPA would consider as an emergency situation and would consider special treatment on a case-by-case issue? Giedrius Alliance of Automobile Manufacturers (248) 915-8836 From: John Cabaniss [jcabaniss@aiam.org] Sent: Wednesday, December 08, 2010 4:09 PM To: Giedrius Ambrozaitis Subject: GHG questions Giedrius, I understand the Alliance has submitted a lengthy list of GHG certification questions to EPA. Could you share your list? John As of December 13, my new contact information is: John M. Cabaniss, Jr. Director, Environment & Energy
Association of International Automobile Manufacturers, Inc. Association of Internationa. 1050 K Street, NW Suite 650 Washington, DC 20001 202.650.5562 (direct) 202.650.5555 (main) Please note that AIAM will have limited phone/fax/email access from noon on Friday December 10 through Monday, December 13. This e-mail is intended for the sole and exclusive use of AIAM, its member companies and their employees. Distribution or forwarding of these materials to any other person or entity is strictly prohibited, absent prior consent of AIAM.

(See attached file: Alliance GHG Implementation Questions for EPA Sep 23 2010 Work Shop.doc)

answers given in another part of the presentation.

From: <u>David Good</u>

To: Peter Meier@ahm.honda.com

Cc: <u>Darin Johnson@ahm.honda.com; Joel Ball; masaki yamaguchi@ahm.honda.com; Roberts French</u>

Subject: Re: Honda - Fw: GHG questions

Date: 04/14/2011 04:56 PM

Attachments: Alliance GHG Implementation Questions for EPA Sep 23 2010 Work Shop.doc

Pete,

EPA hasn't officially responded to the Alliance's questions. They subsequently modified their list---since some of the questions were answered in the 9/23/10 GHG workshop, etc.

I can go over EPA's DRAFT responses to their questions any time next week.

I'm out on Fri (4/15) back on Monday (4/18/11).

Dave

▼ Peter_Meier---04/14/2011 03:01:03 PM---Hello Rob and Dave, I'm following up on an old document that the Alliance shared with AIAM (now

From: Peter_Meier@ahm.honda.com

To: Roberts French/AA/USEPA/US@EPA, David Good/AA/USEPA/US@EPA

Cc: Joel Ball/AA/USEPA/US@EPA, Darin_Johnson@ahm.honda.com, masaki_yamaguchi@ahm.honda.com

Date: 04/14/2011 03:01 PM Subject: Honda - Fw: GHG questions

```
Hello Rob and Dave,
I'm following up on an old document that the Alliance shared with
AIAM (now
Global Automakers). They had a list of 18 questions (below). We
wondering if EPA responded to any or all of these, and if so,
could you
share your responses? Of course if you can offer any other
information
that would be appreciated as well.
Thank you,
Pete Meier, American Honda Certification
(310) 783-3424
---- Forwarded by Peter Meier/AHM/AM/HONDA on 04/14/2011 11:54
AM ----
John Cabaniss <jcabaniss@aiam.org> on 12/11/2010 07:06:32 AM
       " Park, J. S. (Kia)" <jspark@kiausa.com>, "Alden, Jack
To:
(Honda)"
       <jack alden@ahm.honda.com>, "Alsip, Bob (Suzuki)"
<balsip@suz.com>,
```

```
"Amato, Ragiemra (Delphi)" <ragiemra.amato@delphi.com>,
Annemarie
          Pender <apender@aiam.org>, "Arima, Yuichi (Honda)"
          <yuichi_arima@hm.honda.co.jp>, "Azuma, Shinya (Honda) "
<shinya_azuma@hm.honda.co.jp>, "Babcock, Bob (Hyundai)"
<rboxcock@hatci.com>, "Bacon, Ian (McLaren)"
          <ian.bacon@mclaren.com>, "Bakker, Debbie (Hyundai)"
          <dbakker@hatci.com>, "Banowetz, Roger (Subaru)"
          <BanowetzR@Subaru-research-ca.com>, "Barker, David
(Hvundai-Kia)"
          <dbarker@hatci.com>, "Barnes, Duke (Nissan) "
<duke.barnes@nissan-usa.com>, "Bienenfeld, Robert
(Honda)"
          <robert bienenfeld@ahm.honda.com>, "Bookbinder, Ron
(JAMA)"
          <rbookbinder@jama.org>, "Brillhart, Ember (Honda)"
<Ember_Brillhart@hna.honda.com>, "Brune, Ed (Peugeot) "
          <ed.brune@psaustr.com>, "Buma, Keiichi (Denso)"
<buma@ead.denso.co.jp>, "Bush, Ken (Suzuki)"
<kbush@suz.com>,
          Caitlin Baier <CBaier@aiam.org>, "Cardno, Robert (Denso)" <ROBERT_CARDNO@denso-diam.com>, "Caruso, Michael L.
(Bosch)"
          <michael.caruso@us.bosch.com>, "Cattelani, Mauro
(Maserati)"
          <mcattelani@maserati.it>, "Cavanaugh, Timothy (Bosch)"
<timothy.cavanaugh@us.bosch.com>, "Cavicchioli, Elisa
(Ferrari)"
          <ecavicchioli@ferrari.it>, "Cayetano, Garcia (Bosch) "
<Cayetano.Garcia@us.bosch.com>, "Chang, Tommy (Honda)"
<tommy_chang@ahm.honda.com>, "Cingi, Corrado (Ferrari)"
<ccingi@ferrari.it>, "Cohen, Ed (Honda)"

          <eduard_cohen@hna.honda.com>, "Coss, Ray (Nissan)"
<Ray.Coss@nmm.nissan-usa.com>, "Crafard, Scott (Isuzu)"
<Scott.Crafard@isza.com>, "DeAscentiis, Brian (Subaru)"
<bdea@SUBARU.com>, "Deshpande, Sanjay (Mahindra)"
<DESHPANDE.SANJAY3@mahindra.com>, Di Pagnotti
<dpagnotti@aiam.org>,
          "Doku, Dan (Maserati)" <ddoku@maseratiusa.com>, "Duncan,
Bill
          (JAMA)" <wd@jama.org>, "Eccleston, James (Aston Martin) "
          <jecclest@astonmartin.com>, "Edwards, Ken (Denso)'
          <kenneth edwards@denso-diam.com>, Ellen Gleberman
          <egleberman@aiam.org>, "Eum, Harry (Hyundai)"
<hseum@hyundai.com>,
          "Feygin, George (Nissan)" < george.feygin@nissan-usa.com>,
"Fields,
          Sandy (Nissan)" <FieldsS@NRD.Nissan-usa.com>, "Gibbons,
John
          (Nissan) " <john.gibbons@nissan-usa.com>, "Gloddeck, Al
(Nissan)"
          <alfred.gloddeck@nissan-usa.com>, "Grieb, Gary (Delphi)"
<gary.r.greib@delphi.com>, "Gutierrez, Jolene (Honda)"
<jolene_gutierrez@ahm.honda.com>, "Hernandez, Luis
(Suzuki)"
          <luis.hernandez@suz.com>, "Hiple, Sarah (Nissan)"
<sarah.hiple@nissan-usa.com>, Jill Pokorney
<jpokorney@aiam.org>,
          John Cabaniss <jcabaniss@aiam.org>, "John Frooshani
(Subaru)"
          <jfrooshani@SUBARU.com>, "Johnson, Darin (Honda)"
          <Darin_Johnson@ahm.honda.com>, "Johnson, Steve (Hyundai)"
<sjohnson@hmausa.com>, "Kardos, Dale "
          <dale.kardos@motorvehicleregs.com>, "Khan, Farrukh
(Nissan)"
          <KhanF@NRD.Nissan-usa.com>, "Kim, Jacquelyn (Hyundai)"
<JacquelynKim@hmausa.com>, "Kondo, Ken (Suzuki)"
<kentaro.kondo@suz.com>, "Koseki, Takahiro (Isuzu) "

          <masahiko a maeda@hm.honda.co.jp>, "Marsee, Jeff (Isuzu)"
```

```
<jeff.marsee@isza.com>, "Masahiro, Inden (ADVICS) "
<minden@advics-na.com>, "Matthias, Tappe (Bosch)"
<Matthias.Tappe@de.bosch.com>, "Meier, Peter (Honda)"
            <Peter Meier@ahm.honda.com>, Mike Stanton
<mstanton@aiam.org>,
            "Mohanraj, Nataraj (Mahindra) "
"Nakamura-Newbraugh, Yasumi (Nissan)"
            <yasumi.nakamura-newbraugh@nissan-usa.com>, "Neff, Donald
(Nissan)
            <donald.neff@nissan-usa.com>, "Nott, Tammy (Hyundai)"
<tnott@hatci.com>, "Nunneley, John (Hitachi)"
<John.Nunneley@hap.com>, "Oketani, Toshikazu (Honda) "
            <toshikazu oketani@hm.honda.co.jp>, "Pandian, Senthur
(Mahindra)"
            <Senthur.Pandian@mahindra.com>, "Patton, Douglas (Denso)"
<doug_patton@denso-diam.com>, "Paul D. Ryan"
cpryan@aiam.org>,
            "Poll, Mark (Denso) " <mark poll@denso-diam.com>, "Pommer,
John
            (Nissan) " <John.Pommer@nissan-usa.com>, "Powell, Richard
(McLaren)"
            <Richard.Powell@mclaren.com>, "Ragazzi, Alessandro
(Maserati)"
            <aragazzi@maserati.it>, "Rege, Julia (Hyundai)"
<jrege@hatcí.com>,
            "Robert Cassidy (Nissan)" <robert.cassidy@nissan-usa.com>,
"Rugge,
            John (Subaru) " < rugge@SUBARU.com>, "Sakai, Ichiro
(Honda)"
            <Ichiro_Sakai@ahm.honda.com>, "Sasaki, Kyosuke (Honda) "
<kyosuke_Sasaki@ahm.honda.com>, "Sekiguchi, Yoshiki
"
(Denso)
            <yoshiki_sekiguchi@denso-diam.com>, "Sekikawa, Tetsuro
            <tetsuro sekikawa@hm.honda.co.jp>, "Shaw, Cheri (Nissan)" <Cheri.Shaw@nissan-usa.com>, "Shimizu, Yasuhiro (Denso)"
            <reg@ead.denso.co.jp>, "Shirao, Shin (Isuzu)"
<Shin.Shirao@isza.com>, "Smith, Lindsey (Hyundai-Kia)"
<lsmith@hatci.com>, "Smith, Melissa (Denso) "
            <melissa smith@denso-diam.com>, "Stott, Brad (Ferrari)"
<bstott@ferrariusa.com>, "Styles, Bryan (Denso)"
            <BRYAN STYLES@denso-diam.com>, "Suryanarayanan V.
(Mahindra) "
           "Tan'

<v.suryanarayanan@mahindra.com>, Susan Tashjian
  <stashjian@aiam.org>, "Suzuki, Ryuji (Suzuki)"
  <Ryuji.Suzuki@suz.com>, "Sweeney, Dan (Denso)"
  <dan_sweeney@denso-diam.com>, "Tinkler, Brian (Honda)"
  <bri><bri><bri><br/>

<pr
(Denso)"
"
"
<ROBERT TOWNSEND@denso-diam.com>, "Tunick, Lance "
<tunick@vsci.net>, "UllRich, Lars (Bosch)"
<Lars.Ullrich@us.bosch.com>, "Velusamy R (Mahindra)"
<VELUSAMY.R@mahindra.com>, "Wagner, Laurie (Hyundai)"
<LWagner@hatci.com>, "Wiles, Steve (Aston Martin)"
<swiles1@astonmartin.com>, "Woolery, Dennis (Subaru)"
<Woolery@subaru-research-mi.com>, "Yagi, Hirokazu (Denso)"
<hirokazu_yagi@denso-diam.com>, "Yamaguchi, Masaki"
(Honda)'
            <Masaki_Yamaguchi@ahm.honda.com>, "Yarosz, Steven (Isuzu)"
<steven.yarosz@isza.com>, "Yoshiaki, Yamauchi (Isuzu)"
            <Yoshiaki.Yamauchi@isza.com>, "Yoshida, Makoto (Nissan)"
            <makoto.yoshida@nissan-usa.com>, "Zeng, Jan (Denso)"
            <jie zeng@denso-diam.com>
            Robert Maxwell <remaxwell@comcast.net>
CC:
Subject:
                    FW: GHG questions
                      AIAM Environment & Energy Subcommittee
To:
                    Certification - GHG - Alliance Questions Submitted to
Re:
EPA
```

Attached in the email below and in the attached Word document are follow up questions on GHG certification submitted by the Alliance to EPA after the EPA September workshop. EPA is preparing answers to these and other questions submitted by industry. Regards. John Cabaniss We have moved! As of December 13, my new contact information is: John M. Cabaniss, Jr. Director, Environment & Energy Association of International Automobile Manufacturers, Inc. 1050 K Street, NW Suite 650 Washington, DC 20001 202.650.5562 (direct) 202.650.5555 (main) Please note that AIAM will have limited phone/fax/email access from noon on Friday December 10 through Monday, December 13. This e-mail is intended for the sole and exclusive use of AIAM, its member companies and their employees. Distribution or forwarding of these materials to any other person or entity is strictly prohibited, absent prior consent of AIAM. From: Giedrius Ambrozaitis [mailto:gambrozaitis@autoalliance.org] Sent: Thursday, December 09, 2010 3:16 PM To: John Cabaniss Subject: RE: GHG questions We submitted the attached and then followed up with the following: Giedrius Alliance of Automobile Manufacturers (248) 915-8836 ***** From: Giedrius Ambrozaitis Sent: Monday, October 04, 2010 10:15 AM To: Wehrly.Linc@epamail.epa.gov Subject: RE: GHG Questions Dear Linc -Thank you for holding the informative GHG Rule Implementation workshop on Sept 23 and for Dave Good's Sept 28 followup email pointing out sales tracking should follow NLEV (as per the GHG rule preamble). We had submitted some questions and several were answered, thankyou again, and several, we agree, are not yet ripe for asking (N2O and A/C Idle testing), but several were not answered or the answers given conflict with answers given in another part of the presentation. So, using our original questions doc (attached), here is a new list: Alliance questions answered: 1, 2, 3, 4, 5 (we note on this question that is very important for manufacturers to receive the list of changes to VERIFY data inputs as soon as possible to be able to efficiently implement the necessary IT changes) , 6, 8, 15

```
Alliance questions we agree are too early to answer now:
11, 16
Alliance questions that we would still like answered: 9, 12, 13,
14, 18
EPA answers that conflict: Alliance questions 7 and 17:
Question 7: EPA answered this on slide 68, bullet 3, subbullet 1-
"Engineering evaluation required in Part I for CO2, CH4, N2O:
calibration approaches are used at high altitudes." However,
since EPA
already requires compliance with emission standard at altitude,
there is no
need for a further compliance statement that the calibration
approaches are
the same at high altitude as at low altitude. Indeed, the
opposite may be
true to ensure compliance with emission standard at high
altitude. We
recommend this subbullet be deleted.
Question 17: In order to align with CAFE, GHG compliance must be
tracked
via production data too, not via sales data. As Dave Good
correctly points
out in his Sep 28 email, the GHG rule preamble states that
tracking is to
be performed as it was in the NLEV rule, using "point of first
sale", which
is essentially the same as production data (with some slight
inconsistencies for emergency vehicles and territories noted
below).
However, the actual GHG rule regulatory language and the slides
from the
Sep 23 workshop (slide 45 bullet 2) don't agree with that
preamble
language. 86.1867-12(a)(1)(iii)(A) states that "Total U.S. model
year sales
data will be used, instead of production data; "however, the
introductory
paragraph to 86.1867-12 states that "The terms 'sales' and 'sold'
as used
in this section shall mean vehicles produced and delivered for
sale in the
states and territories of the United States." Since EPA defined
"sales" and
"sold" in the introductory paragraph, the contradictory and
confusing
phrase "instead of production data" should be deleted from
paragraph
86.1867-12(a)(1)(iii)(A).
Even though the use of NLEV sales tracking method is close to the
same as
using production numbers, it is not exactly the same. This
introduces
certain inconsistencies with CAFE's true production number
tracking, for instance, with sales to territories that are in GHG but not CAFE,
the tracking of emergency vehicle sales. Extra territories that
are in GHG
but not in CAFE, such as Guam, need to be excluded from the
reporting
requirements, and the use of production data would accomplish
this. For
emergency vehicles, EPA stated on Sep 23 slide 14 that they're
including
emergency vehicles but then stated on Sep 23 slide 16 that the
minimum
testing requirements are the same as for CAFE so it "assures that
the same
data set will be used for both GHG & CAFE". Actually, it doesn't
do that
because police units will have tests for GHG that aren't used in
Although NLEV method is an acceptable method, we continue to
```

recommend that GHG use exactly the same tracking as in CAFE, namely, production numbers. EPA needs to be aware of the inconsistencies to make the VERIFY file formats compatible with this distinction, or preferably, allow manufacturers to report GHG for only the CAFE volumes plus emergency vehicles. Totally new Alliance Question: Regarding the 5cycle FE label rule's limitation of 19. applicability of the 90 days rule (referring to the use of manufacturer tests for the litmus test instead of EPA confirmatory tests) only to MY2011. We have heard that in some special emergency cases, EPA would consider extending the rule also to past MY2011 vehicles. Can EPA clarify under what circumstance EPA would consider as an emergency situation and would consider special treatment on a case-by-case issue? Regards, Giedrius Alliance of Automobile Manufacturers (248) 915-8836 From: John Cabaniss [jcabaniss@aiam.org] Sent: Wednesday, December 08, 2010 4:09 PM To: Giedrius Ambrozaitis Subject: GHG questions Giedrius, I understand the Alliance has submitted a lengthy list of GHG certification questions to EPA. Could you share your list? Thanks. John As of December 13, my new contact information is: John M. Cabaniss, Jr. Director, Environment & Energy Association of International Automobile Manufacturers, Inc. 1050 K Street, NW Suite 650 Washington, DC 20001 202.650.5562 (direct) 202.650.5555 (main) Please note that AIAM will have limited phone/fax/email access from noon on Friday December 10 through Monday, December 13. This e-mail is intended for the sole and exclusive use of AIAM, its member companies and their employees. Distribution or forwarding of these materials to any other person or entity is strictly prohibited, absent prior consent of AIAM.

(See attached file: Alliance GHG Implementation Questions for EPA Sep 23 2010 Work Shop.doc)



From: Robin Moran

To: Arvon Mitcham; Roberts French; Christopher Lieske

Subject: Fw: Electric Heat Circulation Pump

Date: 04/12/2012 08:18 AM

Rob, I had already forwarded this to Arvon to consider, but thought you should see it too to see if it would work for the regs. Arvon/team will make a recommendation on the technical merits of course too.

---- Forwarded by Robin Moran/AA/USEPA/US on 04/12/2012 08:17 AM -----

From: Robert_Bienenfeld@ahm.honda.com

To: Ed Nam/AA/USEPA/US@EPA, Robin Moran/AA/USEPA/US@EPA

Cc: William Charmley/AA/USEPA/US@EPA

Date: 04/11/2012 06:42 PM

Subject: Electric Heat Circulation Pump

Ed, Robin:

At our Honda meeting to discuss off-cycle credits, you'll remember that Honda indicated we believe we can meet the functional performance criteria of the Electric Heat Circulation Pump without actually installing one. We proposed that the language be modified to allow the off-cycle credit for the performance you are after, regardless of whether or not an Electric Heat Circulation Pump is installed. Robin specifically asked for recommended language, so here are a few suggestions:

1. The definition could be modified to read something like this:
(B) Electric heater circulation pump means a pump or other system installed in a stop-start equipped vehicle or in a hybrid electric vehicle or plug-in hybrid electric vehicle. that continues to circulate hot coolant through the heater core when the engine is stopped during a stop-start event. This system must be calibrated to keep the engine off for 1 minute or more when the external ambient temperature is 30 deg F. An electric heater circulation pump continues to circulate hot coolant through the heater core when the engine is stopped during a stop-start event. Any other system which is installed that achieves the same functional performance of heating the cabin while the engine is off when the external temperature is 30 deg F would qualify for the same off-cycle credit as the Electric heater circulation pump.

rjb

From: **Arvon Mitcham** To: Robin Moran

Christopher Lieske; Roberts French Re: Fw: Electric Heat Circulation Pump Subject:

Date: 04/12/2012 08:46 AM

So, should we docket this message? Otherwise, I don't see how we can incorporate.

Let me know.

- Arvon L. Mitcham

▼ Robin Moran---04/12/2012 08:18:21 AM---Rob, I had already forwarded this to Arvon to consider, but thought you should see it too to see if

From: Robin Moran/AA/USEPA/US

To: Arvon Mitcham/AA/USEPA/US@EPA, Roberts

French/AA/USEPA/US@EPA, Christopher Lieske/AA/USEPA/US@EPA

Date: 04/12/2012 08:18 AM

Subject: Fw: Electric Heat Circulation Pump

Rob, I had already forwarded this to Arvon to consider, but thought you should see it too to see if it would work for the regs. Arvon/team will make a recommendation on the technical merits of course too.

---- Forwarded by Robin Moran/AA/USEPA/US on 04/12/2012 08:17 AM -----

From: Robert_Bienenfeld@ahm.honda.com

To: Ed Nam/AA/USEPA/US@EPA, Robin Moran/AA/USEPA/US@EPA
Cc: William Charmley/AA/USEPA/US@EPA

Date: 04/11/2012 06:42 PM

Subject: Electric Heat Circulation Pump

Ed, Robin:

At our Honda meeting to discuss off-cycle credits, you'll remember that Honda indicated we believe we can meet the functional performance criteria of the Electric Heat Circulation Pump without actually installing one. We proposed that the language be modified to allow the off-cycle credit for the performance you are after, regardless of whether or not an Electric Heat Circulation Pump is installed. Robin specifically asked for recommended language, so here are a few suggestions:

The definition could be modified to read something like this: (B) Electric heater circulation pump means a pump or other system installed in a stop-start equipped vehicle or in a hybrid electric vehicle or plug-in

hybrid electric vehicle. that continues to circulate hot

coolant through

the heater core when the engine is stopped during a stop-start event. This system must be calibrated to keep the engine off for 1 minute or more when the external ambient temperature is 30 deg F. An electric heater circulation pump continues to circulate hot coolant through the heater core when the engine is stopped during a stop-start event. Any other system which is installed that achieves the same functional performance of heating the cabin while the engine is off when the external temperature is 30 deg F would qualify for the same off-cycle credit as the Electric heater circulation pump.

rjb

From: Robin Moran
To: Arvon Mitcham

Cc: <u>Christopher Lieske</u>; <u>Roberts French</u>
Subject: Re: Fw: Electric Heat Circulation Pump

Date: 04/12/2012 08:49 AM

Arvon, if we end up believing this approach has merit, then yes, we should go back and ask Robert if it is ok to docket.

▼ Arvon Mitcham---04/12/2012 08:46:06 AM---So, should we docket this message? Otherwise, I don't see how we can incorporate.

From: Arvon Mitcham/AA/USEPA/US
To: Robin Moran/AA/USEPA/US@EPA

Cc: Christopher Lieske/AA/USEPA/US@EPA, Roberts

French/AA/USEPA/US@EPA Date: 04/12/2012 08:46 AM

Subject: Re: Fw: Electric Heat Circulation Pump

So, should we docket this message? Otherwise, I don't see how we can incorporate.

Let me know.

- Arvon L. Mitcham

▼ Robin Moran---04/12/2012 08:18:21 AM---Rob, I had already forwarded this to Arvon to consider, but thought you should see it too to see if

From: Robin Moran/AA/USEPA/US

To: Arvon Mitcham/AA/USEPA/US@EPA, Roberts

French/AA/USEPA/US@EPA, Christopher Lieske/AA/USEPA/US@EPA

Date: 04/12/2012 08:18 AM

Subject: Fw: Electric Heat Circulation Pump

Rob, I had already forwarded this to Arvon to consider, but thought you should see it too to see if it would work for the regs. Arvon/team will make a recommendation on the technical merits of course too.

---- Forwarded by Robin Moran/AA/USEPA/US on 04/12/2012 08:17 AM -----

From: Robert_Bienenfeld@ahm.honda.com

To: Ed Nam/AA/USEPA/US@EPA, Robin Moran/AA/USEPA/US@EPA

Cc: William Charmley/AA/USEPA/US@EPA

Date: 04/11/2012 06:42 PM

Subject: Electric Heat Circulation Pump

Ed, Robin:

At our Honda meeting to discuss off-cycle credits, you'll remember that
Honda indicated we believe we can meet the functional performance criteria of the Electric Heat Circulation Pump without actually installing one. We proposed that the language be modified to allow the off-cycle credit for the performance you are after, regardless of whether or not an Electric Heat Circulation Pump is installed. Robin specifically asked for recommended language, so here are a few suggestions:

1. The definition could be modified to read something like this: (B) Electric heater circulation pump means a pump or other system installed in a stop-start equipped vehicle or in a hybrid electric vehicle or plug-in hybrid electric vehicle. that continues to circulate hot coolant through the heater core when the engine is stopped during a stop-start event. This system must be calibrated to keep the engine off for 1 minute or more when the external ambient temperature is 30 deg F. An electric heater circulation pump continues to circulate hot coolant through the heater core when the engine is stopped during a stop-start event. Any other svstem which is installed that achieves the same functional performance of heating the cabin while the engine is off when the external temperature is 30 deg F would qualify for the same off-cycle credit as the Electric heater circulation pump.

rjb

From: Roberts French

To: Peter Meier@ahm.honda.com

Cc: <u>Darin Johnson@ahm.honda.com</u>; <u>David Good</u>; <u>Joel Dalton</u>; <u>Robert Peavyhouse</u>

Subject: Re: Honda - Natural Gas CAFE/GHG Calculation

Date: 09/18/2012 04:43 PM

Attachments: GHG-CAFE alt fuel treatment v2.pdf

Pete,

I have attached a worksheet that I put together that helps sort out the CAFE and GHG treatment of dedicated and dual fuel alternative fuel vehicles. Of course this should not be regarded as having the same authority as the regulatory text, and should not be a substitute for the regulations, but I believe it accurately summarizes the regulatory provisions in a more visual manner.

As you can see, it is correct that the 0.15 divisor exists only in the GHG world through 2015. It does not persist after that for either dedicated or dual fuel vehicles.

For CAFE, the statute is very explicit about how CAFE should be calculated for dual fuel alternative fuel vehicles up to and including the 2019 model year. It is also fairly explicit about the CAFE treatment of dedicated vehicles up to and beyond the 2019 model year (until Congress makes some changes). Through 2019 the dual fuel CNG-gas vehicle CAFE is a 50/50 weighting of the two fuels, where CNG gets to use the 0.15 divisor. After 2019 the dual fuel CNG-gas vehicle CAFE is a UF-weighting of the two fuels, where the CNG gets to use the 0.15 divisor. Dedicated CNG vehicles may use the 0.15 into eternity, barring Congressional action that changes this. So yes, after 2019 dedicated vehicles may continue to use the 0.15 divisor.

As far as there being no cap for CAFE under the UF approach, that's not quite correct. Through 2019 the approach must be the 50/50 average of the two fuels, and the cap applies. After 2019, on the CAFE side of the equation, the concept of a cap on credits disappears, and the UF-based approach takes over.

On the GHG side of the equation, dual fuel CNG-gas vehicles have a choice through 2015: use the 50/50 weighting and the 0.15 divisor, in which case the CAFE-equivalent cap applies; or use the UF-based approach (no 0.15 divisor), in which as the CAFE-equivalent cap does not apply.

Clear as mud, right?

Rob



Roberts W. French, Jr. U.S. EPA Office of Transportation and Air Quality Compliance and Innovative Strategies Division 2000 Traverwood Drive Ann Arbor, MI 48105

Phone: 734.214.4380 Fax: 734.214.4869 Email: french.roberts@epa.gov

▼ Peter_Meier---09/17/2012 08:33:54 PM---Hi Rob, I'm having a difficult time following how to calculate the CAFE mpg and GHG

From: Peter_Meier@ahm.honda.com
To: Roberts French/AA/USEPA/US@EPA

Cc: Joel Dalton/AA/USEPA/US@EPA, David Good/AA/USEPA/US@EPA,

Darin_Johnson@ahm.honda.com Date: 09/17/2012 08:33 PM

Subject: Honda - Natural Gas CAFE/GHG Calculation

Hi Rob,

I'm having a difficult time following how to calculate the CAFE mpg and GHG fleet (CREE) for both dedicated and dual fuel CNG in the 2012-2025 timeframe. Honda is seriously considering expanding our future CNG offerings, and I'm not able to confidently answer questions regarding fleet calculations. I'm hoping you can help me understand the intent. I think the rules for when we can use the utility factor approach on dual fuel CNG are clear. Where I get lost is when we can apply the 0.15 factor.

It seems for CREE this 0.15 factor is never applied after 2015 for either dedicated nor dual fuel. Is this correct?

For CAFE it appears there's a change after 2019MY, where only the UF approach (2X range, ect..) may use the 0.15 factor. I guess that means dedicate may continue to use the 0.15 factor for CAFE throughout the 2012-2025 timeframe. Is that right?

The utility factor approach seems not count as a credit, and therefore there is no cap for CAFE if using this method. Is that right?

Any advise you can give would be greatly appreciated.

Thank you,

Pete Meier, American Honda Certification (310) 783-3424 cell (310) 972-1501

From: Peter Meier@ahm.honda.com Roberts French/AA/USEPA/US@EPA To:

Joel Dalton/AA/USEPA/US@EPA; Darin Johnson@ahm.honda.com; David Good/AA/USEPA/US@EPA; Robert Cc:

Peavyhouse/AA/USEPA/US@EPA

Re: Honda - Natural Gas CAFE/GHG Calculation Subject:

09/19/2012 12:43 AM Date:

Hi Rob.

Thank you for the quick response. This is extremely helpful as we strive to understand the regulation, and is very much appreciated. I'm out of the office for a few days this week at the OBD Symposium, so I can't review it in detail with other Honda people yet. Although at first review it seems like exactly what we needed.

Thanks again,

Pete

From: Roberts French <French.Roberts@epamail.epa.gov>

To: Cc:

Peter Meier@ahm.honda.com
Darin Johnson@ahm.honda.com, David Good

<Good.David@epamail.epa.gov>, Joel Dalton

<Dalton.Joel@epamail.epa.gov>, Robert Peavyhouse

<Peavyhouse.Robert@epamail.epa.gov>

09/18/2012 01:43 PM

Natural Cos CAFF/CHC Calculation

Date:

Subject: Re: Honda - Natural Gas CAFE/GHG Calculation

I have attached a worksheet that I put together that helps sort out the CAFE and GHG treatment of dedicated and dual fuel alternative fuel vehicles. Of course this should not be regarded as having the same authority as the regulatory text, and should not be a substitute for the regulations, but I believe it accurately summarizes the regulatory provisions in a more visual manner.

As you can see, it is correct that the 0.15 divisor exists only in the GHG world through 2015. It does not persist after that for either dedicated or dual fuel vehicles.

For CAFE, the statute is very explicit about how CAFE should be calculated for dual fuel alternative fuel vehicles up to and including the 2019 model year. It is also fairly explicit about the CAFE treatment of dedicated vehicles up to and beyond the 2019 model year (until Congress makes some changes). Through 2019 the dual fuel CNG-gas vehicle CAFE is a 50/50 weighting of the two fuels, where CNG gets to use the 0.15 divisor. After 2019 the dual fuel CNG-gas vehicle CAFE is a UF-weighting of the two fuels, where the CNG gets to use the 0.15 divisor. Dedicated CNG vehicles may use the 0.15 into eternity, barring Congressional action that changes this. So yes, after 2019 dedicated vehicles may continue to use the 0.15 divisor.

As far as there being no cap for CAFE under the UF approach, that's not quite correct. Through 2019 the approach must be the 50/50 average of the two fuels, and the cap applies. After 2019, on the CAFE side of the equation, the concept of a cap on credits disappears, and the UF-based approach takes over.

On the GHG side of the equation, dual fuel CNG-gas vehicles have a choice through 2015: use the 50/50 weighting and the 0.15 divisor, in which case the CAFE-equivalent cap applies; or use the UF-based approach (no 0.15 divisor), in which as the CAFE-equivalent cap does not apply.

Clear as mud, right?

Rob

Roberts W. French, Jr. U.S. EPA Office of Transportation and Air Quality Compliance and Innovative Strategies Division 2000 Traverwood Drive Ann Arbor, MI 48105 Phone: 734.214.4380

Fax: 734.214.4869 Email: french.roberts@epa.gov

Peter_Meier@ahm.honda.com Roberts_French/AA/USEPA/US@EPA From: To: Cc:

Cc: Joel Dalton/AA/USEPA/US@EPA, David Good/AA/USEPA/US@EPA, Darin Johnson@ahm.honda.com
Date: 09/17/2012 08:33 PM
Subject: Honda - Natural Gas CAFE/GHG Calculation

Hi Rob,

I'm having a difficult time following how to calculate the CAFE mpg and GHG fleet (CREE) for both dedicated and dual fuel CNG in the 2012-2025 timeframe. Honda is seriously considering expanding our future CNG offerings, and I'm not able to confidently answer questions regarding fleet calculations. I'm hoping you can help me understand the intent. I think the rules for when we can use the utility factor approach on dual fuel CNG are clear. Where I get lost is when we can apply the 0.15 factor.

It seems for CREE this 0.15 factor is never applied after 2015 for either dedicated nor dual fuel. Is this correct?

For CAFE it appears there's a change after 2019MY, where only the UF approach (2X range, ect..) may use the 0.15 factor. I guess that means dedicate may continue to use the 0.15 factor for CAFE throughout the 2012-2025 timeframe. Is that right?

The utility factor approach seems not count as a credit, and therefore there is no cap for CAFE if using this method. Is that right?

Any advise you can give would be greatly appreciated.

Thank you,

Pete Meier, American Honda Certification (310) 783-3424 cell (310) 972-1501

[attachment "GHG-CAFE alt fuel treatment v2.pdf" deleted by Peter Meier/AHM/AM/HONDA]

From: <u>Linc Wehrly</u>
To: <u>Roberts French</u>

Subject: Fw: Honda - EPA Meeting on October 23rd

Date: 10/22/2012 12:34 PM

Rob,

I know you will just be getting back, but this meeting is the same time as my weekly team meeting. Would it be possible for you to attend - just to hear their discussion on start/stop off-cycle credits?

Let me know if this would be a problem.

Thanks, Linc

Linc Wehrly
Director, Light-Duty Vehicle Center
Compliance Division
United States Environmental Protection Agency
(734) 214-4286
wehrly.linc@epa.gov

---- Forwarded by Linc Wehrly/AA/USEPA/US on 10/22/2012 12:32 PM -----

From: William Charmley/AA/USEPA/US

To: Ed Nam/AA/USEPA/US@EPA, Robin Moran/AA/USEPA/US@EPA, Linc Wehrly/AA/USEPA/US@EPA, Brian Nelson/AA/USEPA/US@EPA, Arvon

Mitcham/AA/USEPA/US@EPA

Cc: Paul Machiele/AA/USEPA/US@EPA

Date: 10/22/2012 12:08 PM

Subject: Fw: Honda - EPA Meeting on October 23rd

Ed, Robin, Linc and Brian -

Paul has been working with Honda on a meeting to discuss some PM/fuels analysis for over a month, and we just learned on Friday that in addition to that topic, Honda wants to also discuss the following;

1. GHG Regulation - AC17 Testing (Tanabe), Off cycle credits for Start/Stop systems using a "Cool Storage" Evaporator (Errington)

this meeting starts at 10am on Tuesday (tomorrow), in C174.

Ed/Robin/Brian/Arvon - we will need some combination of the 4 of you for the first 30 minutes or so of the meeting to hear Honda's message on these GHG issues.

Linc - for the off-cycle credit discussion it would be good if someone from your group could participate.

thanks Bill

---- Forwarded by William Charmley/AA/USEPA/US on 10/22/2012 12:05 PM -----

From: Robert_Bienenfeld@ahm.honda.com

To: Paul Machiele/AA/USEPA/US@EPA, William Charmley/AA/USEPA/US@EPA

Cc: JoNell Iffland/AA/USEPA/US@EPA

Date: 10/19/2012 06:36 PM

Subject: Honda - EPA Meeting on October 23rd

```
Paul, Bill:
The attendee list from Honda for our October 23rd meeting at your offices
at 10am are:
Mr. Yuichiro Tanabe, R&D, Japan
Mr. Ayumu Matsuo, Honda R&D Americas (Los Angeles)
Mr. Jeff Jetter, Honda R&D Americas (Los Angeles)
Mr. Brad Errington, R&D Americas (Ohio)
Mr. Jim Erickson, R&D Americas (Ohio)
Mr. Robert Bienenfeld, American Honda Motor Co., PRO
Our final subjects are as follows:

1. GHG Regulation - AC17 Testing (Tanabe), Off cycle credits for Start/Stop systems using a "Cool Storage" Evaporator (Errington)
2. Tier III Regulations - Sulfur concerns (Tanabe), transition issues (Tier II to Tier III and LEV III to Tier III),
    PM Index Discussion (Jetter)
We look forward to seeing you on Tuesday. rjb
Robert Bienenfeld
Senior Manager,
Environment and Energy Strategy
Product Regulatory Office
American Honda Motor Co., Inc.
310.783.3056 Office 310.948.2569 Mobile
```

From: Roberts French
To: Linc Wehrly

Subject: Re: Fw: Honda - EPA Meeting on October 23rd

Date: 10/23/2012 08:19 AM

I'd like to, but it will be close. I'm running my mom to the airport, and hope to be in at just about 10. If I can get on the way within the next half hour then it shouldn't be a problem.

Rob

Roberts W. French, Jr. U.S. EPA Office of Transportation and Air Quality Compliance and Innovative Strategies Division 2000 Traverwood Drive Ann Arbor, MI 48105

Phone: 734.214.4380 Fax: 734.214.4869 Email: french.roberts@epa.gov

-----Linc Wehrly/AA/USEPA/US wrote: -----

To: Roberts French/AA/USEPA/US@EPA From: Linc Wehrly/AA/USEPA/US

Date: 10/22/2012 12:34PM

Subject: Fw: Honda - EPA Meeting on October 23rd

Rob,

I know you will just be getting back, but this meeting is the same time as my weekly team meeting. Would it be possible for you to attend - just to hear their discussion on start/stop off-cycle credits?

Let me know if this would be a problem.

Thanks, Linc

Linc Wehrly
Director, Light-Duty Vehicle Center
Compliance Division
United States Environmental Protection Agency
(734) 214-4286
wehrly.linc@epa.gov

---- Forwarded by Linc Wehrly/AA/USEPA/US on 10/22/2012 12:32 PM ----

From: William Charmley/AA/USEPA/US

To: Ed Nam/AA/USEPA/US@EPA, Robin Moran/AA/USEPA/US@EPA, Linc Wehrly/AA/USEPA/US@EPA,

Brian Nelson/AA/USEPA/US@EPA, Arvon Mitcham/AA/USEPA/US@EPA

Cc: Paul Machiele/AA/USEPA/US@EPA

Date: 10/22/2012 12:08 PM

Subject: Fw: Honda - EPA Meeting on October 23rd

Ed, Robin, Linc and Brian -

Paul has been working with Honda on a meeting to discuss some PM/fuels analysis for over a month, and we just learned on Friday that in addition to that topic, Honda wants to also discuss the following;

 GHG Regulation - AC17 Testing (Tanabe), Off cycle credits for Start/Stop systems using a "Cool Storage" Evaporator (Errington)

this meeting starts at 10am on Tuesday (tomorrow), in C174.

Ed/Robin/Brian/Arvon - we will need some combination of the 4 of you for the first 30 minutes or so of the meeting to hear Honda's message on these GHG issues.

Linc - for the off-cycle credit discussion it would be good if someone from your group could participate.

thanks Bill

---- Forwarded by William Charmley/AA/USEPA/US on 10/22/2012 12:05 PM -----

From: Robert Bienenfeld@ahm.honda.com

To: Paul Machiele/AA/USEPA/US@EPA, William Charmley/AA/USEPA/US@EPA

Cc: JoNell Iffland/AA/USEPA/US@EPA

Date: 10/19/2012 06:36 PM

Subject: Honda - EPA Meeting on October 23rd

Paul, Bill:

The attendee list from Honda for our October 23rd meeting at your offices at 10am are:

- Mr. Yuichiro Tanabe, R&D, Japan
- Mr. Ayumu Matsuo, Honda R&D Americas (Los Angeles)
- Mr. Jeff Jetter, Honda R&D Americas (Los Angeles)
- Mr. Brad Errington, R&D Americas (Ohio)
- Mr. Jim Erickson, R&D Americas (Ohio)
- Mr. Robert Bienenfeld, American Honda Motor Co., PRO

Our final subjects are as follows:

- 1. GHG Regulation AC17 Testing (Tanabe), Off cycle credits for
- Start/Stop systems using a "Cool Storage" Evaporator
 (Errington)
- Tier III Regulations Sulfur concerns (Tanabe),

transition issues
(Tier II to Tier III and LEV III to Tier III),
3. PM Index Discussion (Jetter)

We look forward to seeing you on Tuesday. rjb

Robert Bienenfeld Senior Manager, Environment and Energy Strategy Product Regulatory Office American Honda Motor Co., Inc. 310.783.3056 Office 310.948.2569 Mobile From: Roberts French
To: Linc Wehrly

Subject: Re: Fw: Honda - EPA Meeting on October 23rd

Date: 10/23/2012 08:35 AM

Leaving now, so I think I should be able to make it.

Rob

Roberts W. French, Jr.

U.S. EPA Office of Transportation and Air Quality Compliance and Innovative Strategies Division 2000 Traverwood Drive

Ann Arbor, MI 48105

Phone: 734.214.4380 Fax: 734.214.4869 Email: french.roberts@epa.gov

-----Linc Wehrly/AA/USEPA/US wrote: -----

To: Roberts French/AA/USEPA/US@EPA From: Linc Wehrly/AA/USEPA/US Date: 10/22/2012 12:34PM

Subject: Fw: Honda - EPA Meeting on October 23rd

Rob,

I know you will just be getting back, but this meeting is the same time as my weekly team meeting. Would it be possible for you to attend - just to hear their discussion on start/stop off-cycle credits?

Let me know if this would be a problem.

Thanks, Linc

Linc Wehrly
Director, Light-Duty Vehicle Center
Compliance Division
United States Environmental Protection Agency
(734) 214-4286
wehrly.linc@epa.gov

---- Forwarded by Linc Wehrly/AA/USEPA/US on 10/22/2012 12:32 PM -----

From: William Charmley/AA/USEPA/US

To: Ed Nam/AA/USEPA/US@EPA, Robin Moran/AA/USEPA/US@EPA, Linc Wehrly/AA/USEPA/US@EPA,

Brian Nelson/AA/USEPA/US@EPA, Arvon Mitcham/AA/USEPA/US@EPA

Cc: Paul Machiele/AA/USEPA/US@EPA

Date: 10/22/2012 12:08 PM

Subject: Fw: Honda - EPA Meeting on October 23rd

Ed, Robin, Linc and Brian -

Paul has been working with Honda on a meeting to discuss some PM/fuels analysis for over a month, and we just learned on Friday that in addition to that topic, Honda wants to also discuss the following;

 GHG Regulation - AC17 Testing (Tanabe), Off cycle credits for Start/Stop systems using a "Cool Storage" Evaporator (Errington)

this meeting starts at 10am on Tuesday (tomorrow), in C174.

Ed/Robin/Brian/Arvon - we will need some combination of the 4 of you for the first 30 minutes or so of the meeting to hear Honda's message on these GHG issues.

Linc - for the off-cycle credit discussion it would be good if someone from your group could participate.

thanks Bill

---- Forwarded by William Charmley/AA/USEPA/US on 10/22/2012 12:05 PM -----

From: Robert Bienenfeld@ahm.honda.com

To: Paul Machiele/AA/USEPA/US@EPA, William Charmley/AA/USEPA/US@EPA

Cc: JoNell Iffland/AA/USEPA/US@EPA

Date: 10/19/2012 06:36 PM

Subject: Honda - EPA Meeting on October 23rd

Paul, Bill:

The attendee list from Honda for our October 23rd meeting at your offices at 10am are:

Mr. Yuichiro Tanabe, R&D, Japan

Mr. Ayumu Matsuo, Honda R&D Americas (Los Angeles)

Mr. Jeff Jetter, Honda R&D Americas (Los Angeles)

Mr. Brad Errington, R&D Americas (Ohio)

Mr. Jim Erickson, R&D Americas (Ohio)

Mr. Robert Bienenfeld, American Honda Motor Co., PRO

Our final subjects are as follows:

1. GHG Regulation - AC17 Testing (Tanabe), Off cycle credits for

Start/Stop systems using a "Cool Storage" Evaporator (Errington)

2. Tier III Regulations - Sulfur concerns (Tanabe), transition issues

(Tier II to Tier III and LEV III to Tier III),

3. PM Index Discussion (Jetter)

We look forward to seeing you on Tuesday. rjb

Robert Bienenfeld Senior Manager, Environment and Energy Strategy Product Regulatory Office American Honda Motor Co., Inc. 310.783.3056 Office 310.948.2569 Mobile From: Linc Wehrly
To: Roberts French
Subject: Re: Fw: Honda - EPA Meeting on October 23rd
Date: 10/23/2012 08:45 AM

Thanks, Rob. Don't go crazy trying to make it. There will be people from ASD there, so if we can't make it, I don't think it's a big problem.

Linc Wehrly Director, Light-Duty Vehicle Center Compliance Division United States Environmental Protection Agency (734) 214-4286 wehrly.linc@epa.gov

▼ Roberts French---10/23/2012 08:35:26 AM---Leaving now, so I think I should be able to make it. Rob ------

> From: Roberts French/AA/USEPA/US To: Linc Wehrly/AA/USEPA/US@EPA

Date: 10/23/2012 08:35 AM

Subject: Re: Fw: Honda - EPA Meeting on October 23rd

Leaving now, so I think I should be able to make it. Rob

Roberts W. French, Jr. U.S. EPA Office of Transportation and Air Quality Compliance and Innovative Strategies Division

2000 Traverwood Drive Ann Arbor, MI 48105

Phone: 734.214.4380 Fax: 734.214.4869 Email:

french.roberts@epa.gov

-----Linc Wehrly/AA/USEPA/US wrote: -----

To: Roberts French/AA/USEPA/US@EPA

From: Linc Wehrly/AA/USEPA/US Date: 10/22/2012 12:34PM

Subject: Fw: Honda - EPA Meeting on October 23rd

Rob,

I know you will just be getting back, but this meeting is the same time as my weekly team meeting. Would it be possible for you to attend -

just to hear their discussion on start/stop off-cycle credits?

Let me know if this would be a problem.

Thanks, Linc

Linc Wehrly
Director, Light-Duty Vehicle Center
Compliance Division
United States Environmental Protection Agency
(734) 214-4286
wehrly.linc@epa.gov

---- Forwarded by Linc Wehrly/AA/USEPA/US on 10/22/2012 12:32 PM

From: William Charmley/AA/USEPA/US

To: Ed Nam/AA/USEPA/US@EPA, Robin Moran/AA/USEPA/US@EPA, Linc Wehrly/AA/USEPA/US@EPA, Brian Nelson/AA/USEPA/US@EPA,

Arvon Mitcham/AA/USEPA/US@EPA Cc: Paul Machiele/AA/USEPA/US@EPA

Date: 10/22/2012 12:08 PM

Subject: Fw: Honda - EPA Meeting on October 23rd

Ed, Robin, Linc and Brian -

Paul has been working with Honda on a meeting to discuss some PM/fuels analysis for over a month, and we just learned on Friday that in addition to that topic, Honda wants to also discuss the following;

1. GHG Regulation - AC17 Testing (Tanabe), Off cycle credits for Start/Stop systems using a "Cool Storage" Evaporator (Errington)

this meeting starts at 10am on Tuesday (tomorrow), in C174.

Ed/Robin/Brian/Arvon - we will need some combination of the 4 of you for the first 30 minutes or so of the meeting to hear Honda's message on these GHG issues.

Linc - for the off-cycle credit discussion it would be good if someone from your group could participate.

thanks Bill

---- Forwarded by William Charmley/AA/USEPA/US on 10/22/2012 12:05 PM ----

From: Robert_Bienenfeld@ahm.honda.com To: Paul Machiele/AA/USEPA/US@EPA, William

Charmley/AA/USEPA/US@EPA

Cc: JoNell Iffland/AA/USEPA/US@EPA

Date: 10/19/2012 06:36 PM

Subject: Honda - EPA Meeting on October 23rd

Paul, Bill:

The attendee list from Honda for our October 23rd meeting at your offices at 10am are:

Mr. Yuichiro Tanabe, R&D, Japan

Mr. Ayumu Matsuo, Honda R&D Americas (Los Angeles)

Mr. Jeff Jetter, Honda R&D Americas (Los Angeles)

Mr. Brad Errington, R&D Americas (Ohio)

Mr. Jim Erickson, R&D Americas (Ohio)

Mr. Robert Bienenfeld, American Honda Motor Co., PRO

Our final subjects are as follows:

1. GHG Regulation - AC17 Testing (Tanabe), Off cycle credits for

Start/Stop systems using a "Cool Storage" Evaporator (Errington)

2. Tier III Regulations - Sulfur concerns (Tanabe), transition issues

(Tier II to Tier III and LEV III to Tier III),

3. PM Index Discussion (Jetter)

We look forward to seeing you on Tuesday. rjb

Robert Bienenfeld Senior Manager, Environment and Energy Strategy Product Regulatory Office American Honda Motor Co., Inc. 310.783.3056 Office 310.948.2569 Mobile From: Ed Nam

To: Paul Machiele; Kathryn Sargeant; John Koupal; Aron Butler; Brian Nelson; Arvon Mitcham; Linc Wehrly; Roberts

French; Robin Moran; Byungho Lee; Catherine Yanca; Antonio Fernandez

Cc:William CharmleySubject:Fw: Today's DocumentDate:10/23/2012 02:56 PM

Attachments: Honda EPA Meeting 121023.pdf

Hi all,

below is Honda's presentation from today. Please remember that this is CBI.

-Ed

---- Forwarded by Ed Nam/AA/USEPA/US on 10/23/2012 02:54 PM ----

From: Robert_Bienenfeld@ahm.honda.com

To: William Charmley/AA/USEPA/US@EPA, Ed Nam/AA/USEPA/US@EPA, Paul

Machiele/AA/USEPA/US@EPA, Kathryn Sargeant/AA/USEPA/US@EPA

Date: 10/23/2012 02:41 PM Subject: Today's Document

Thank you for joining us for a very productive meeting, today. We really appreciate the opportunity to have these candid discussions. Here is our document from today.

Please forward to other EPA attendees, as appropriate:

(See attached file: Honda EPA Meeting 121023.pdf)

rjb

Robert Bienenfeld Senior Manager, Environment and Energy Strategy Product Regulatory Office American Honda Motor Co., Inc.

310.783.3056